

# Physical Climate and Hazard Risk Analysis

Portfolio and site-level climate risk and exposure analysis for all U.S. locations

UrbanFootprint delivers a full suite of physical climate risk and exposure metrics for all U.S. locations. With telescopic analysis spanning from the individual land parcel up to any combination of locations or assets anywhere in the U.S, the platform can process and report current and future risk metrics for any portfolio of real estate holdings, locations, or assets, as well as provide deep dive mapping and analytics for specific locations or project sites.

The UrbanFootprint platform dramatically streamlines and enhances any effort to map and measure physical climate risk and assess any portfolio or location. It brings together and aligns previously siloed built environment, community, and hazard risk metrics for all major climate and environmental perils across the entire U.S.

With UrbanFootprint, a team can perform deep hazard risk analyses for any client engagement and create and present 'decision-useful' analyses that inform TCFD and other reporting requirements and guidelines. Project teams can deliver risk assessments quickly and proceed to delivering higher-value mitigation, compliance, and planning strategies for a wide range of real estate, financial, and government clients.

### ANALYZE ANY LOCATION

Locations or assets are geo-located and processed through UrbanFootprint's nationwide data core, a normalized and upto-date view of land use and site conditions across 160 million U.S. land parcels.



### POINTS



### AKEAS

(e.g. City, Service/Market Area)

### **Climate & Hazard Risk Models**

Current and future risk and exposure by time horizon and RCP scenarios

Sea Level Rise

**Storm Surge** 

Flood Risk

**Tornado Risk** 

Inundation from 2-10 ft SLR scenarios

Present and future storm surge inundation

Present and future frequency and severity

Present and future\* flood risk

Damaging Wind Risk

Frequency and severity\*

### **Extreme Temperature**

Present and future frequency and severity

### **Extreme Precipitation**

Present and future frequency and severity

### **Severe Drought**

Present and future frequency and severity

### Earthquake

Peak ground acceleration (PGA)

### Wildfire

Present and future\* categorical wildfire

Non-Cyclonic Frequency and severity of continental

### **Built Environment Metrics**

Land use & buildings, mobility, key destinations, proximity & accessibility. & infrastructure

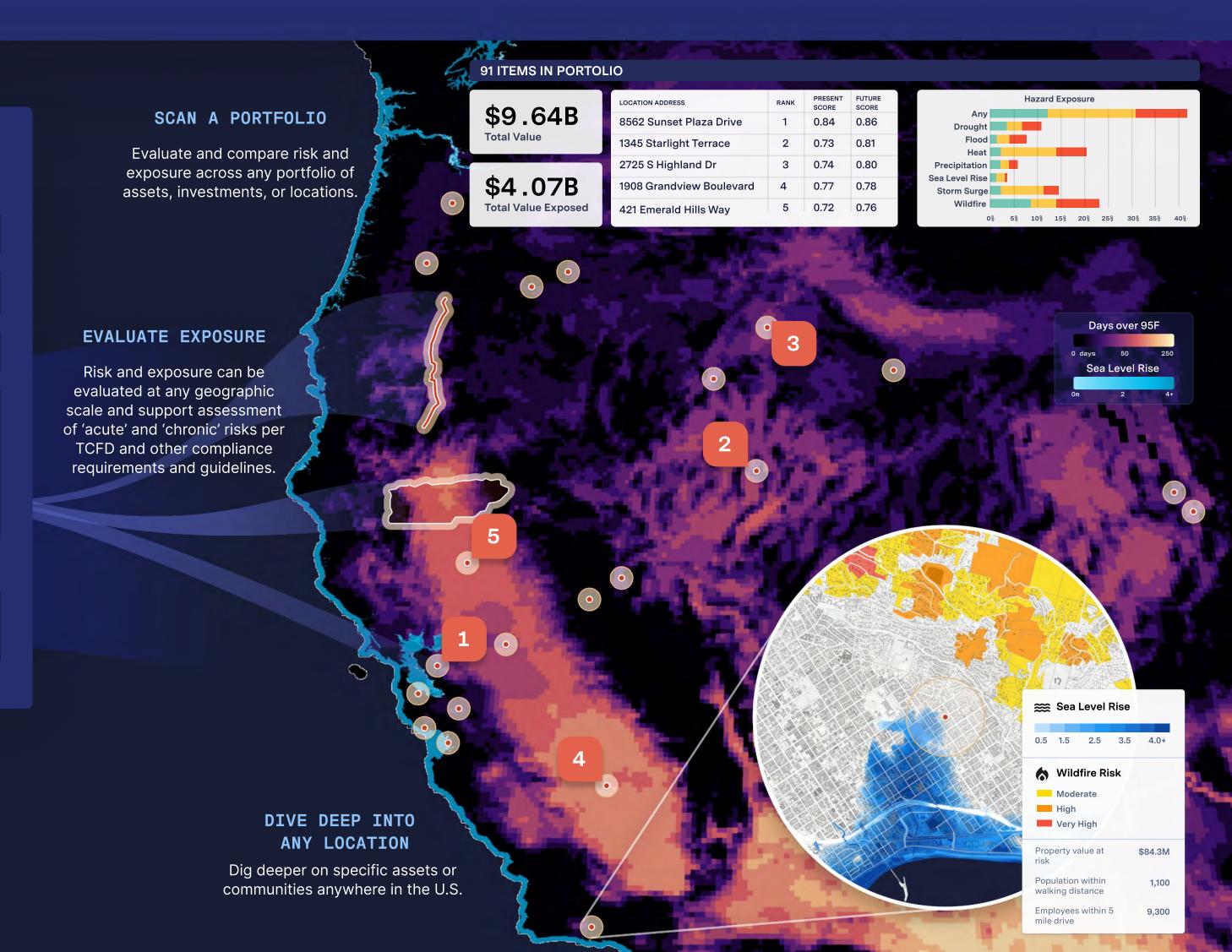
### **Community Metrics**

Community vulnerability & household characteristics

\* Future risk modeling in Q1'24.

### CONNECT TO RESILIENCE INSIGHTS

Each location is connected to UrbanFootprint's full suite of current and future climate and hazard risk models and a curated catalog of relevant built environment and community metrics.



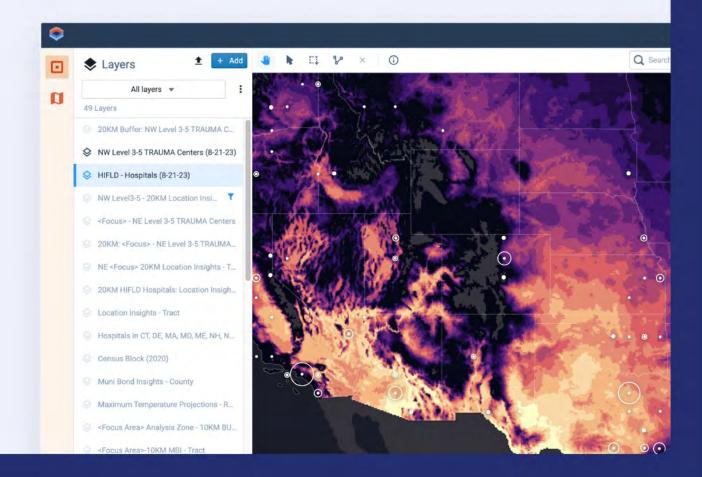
# Climate Risk and Hazard Analysis with the UrbanFootprint Platform

The UrbanFootprint platform can be used to rapidly profile any site or portfolio of locations for a full range of present and future physical climate and hazard risks. Risk and exposure metrics can be evaluated at the parcel or individual site level, along linear assets (such as rail or pipelines), or at any relevant aggregation (e.g. neighborhood, market-area, city, county, zip code). All risk models are intersected with built environment and socio-demographic metrics to facilitate assessments of community or infrastructure vulnerability and better contextualize insight within any hazard risk assessment.



## **National Exploration**

The UrbanFootprint Analyst application comes pre-loaded with all the data needed to explore any area or location in the U.S. for climate and hazard risk. Analyst can be used for pre-sales activities, proposals, and a wide range of marketing activities.

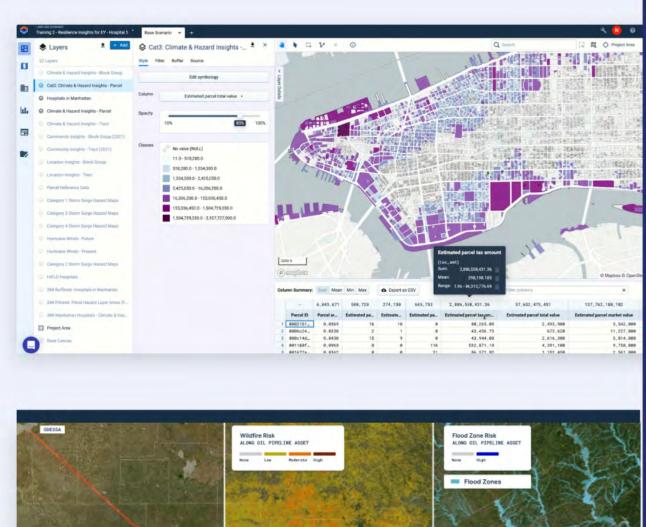


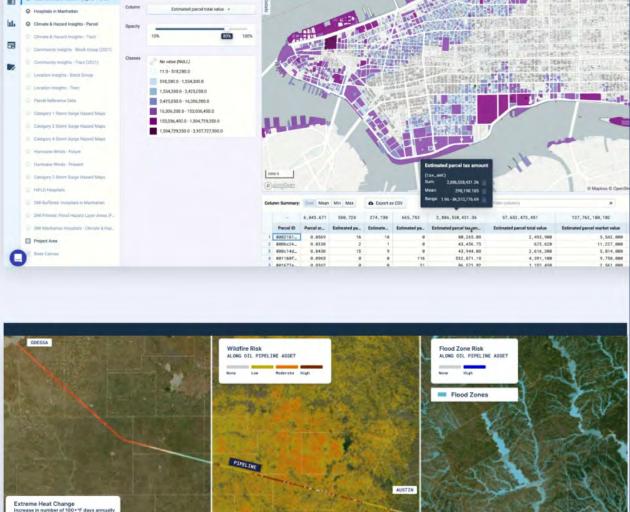


# Map, Analyze, and **Export Risk Analytics**

The Climate and Hazard Insights data package, plus a curated catalog of relevant built environment and community metrics, are loaded into the UrbanFootprint Analyst web application for mapping and analysis of client sites and portfolios. Insights can also be exported to other tools and internal software.

Risk and exposure can be evaluated at any geographic scale and support 'decisionuseful' assessment of 'acute' and 'chronic' risk per TCFD and other compliance requirements and guidelines.





ALONG OIL PIPELINE ASSET



# **Connect Sites and Portfolios** to Hazard Risk and Exposure **Metrics**

Sites, service areas, or portfolios of locations or assets are securely uploaded via the UrbanFootprint Location Analysis Service. The service geo-locates points, linear assets, or any defined areas and connects them to a purpose-built Climate and Hazards Insights package that pre-assembles the majority of metrics needed to profile a site or community and assess 'acute' and 'chronic' risks, and exposure to present and future climate risks.

When specific sites or addresses are not known or if there is a need to evaluate hazard risk and exposure across a specific brand (e.g. grocery chain or retail store), or type of location (e.g. transit stations or community centers), a 'white space' analysis can search the UrbanFootprint national data core and locate sites in any U.S. location.



Locations are uploaded to the



# **Hazard Risk Ranking**

Client portfolios can be scored and ranked according to composite hazard risk. Consulting teams can utilize UrbanFootprint's scoring scheme and/or use the packaged data to develop their own prioritization schemes or 'scores.'

